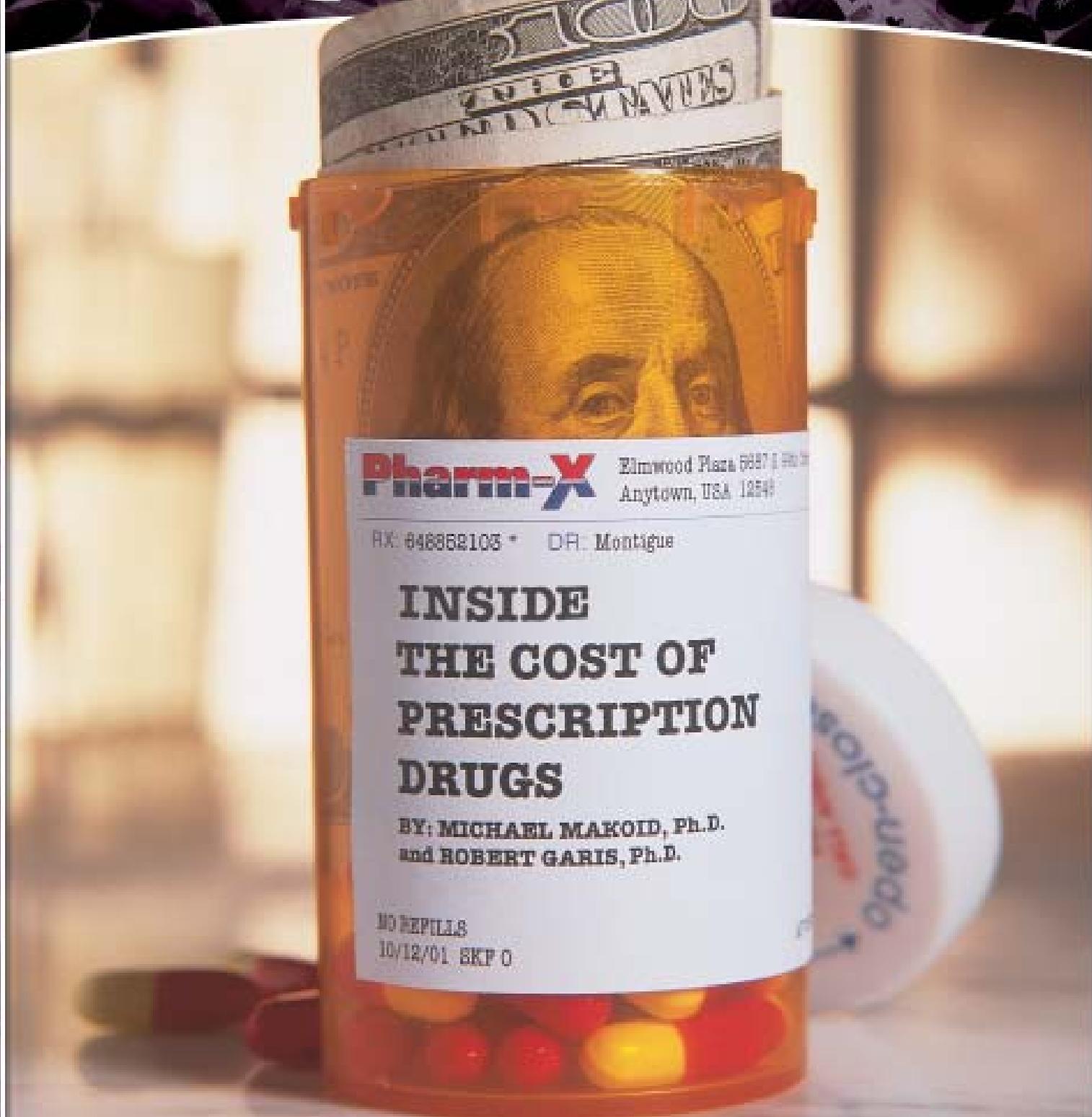


EXHIBIT 11



Creighton University Magazine



Creighton's Stroke Team

Jacob and Joseph

Nancy

Fall 2001

Entering
Class of
2002
and You

Helping recruit undergraduate students for Creighton's College of Arts and Sciences, College of Business Administration and School of Nursing **is as easy as...**

- ① **Send us a prospective student's name on the card provided in this magazine.**
- ② **Give a prospective student a special fee-waived application that will be mailed to all alumni in September.**
- ③ **Direct a prospective student to the Undergraduate Admissions Office website: <http://admissions.creighton.edu/>**

Or call the Undergraduate Admissions Office at **1-800-282-5835**.

For admissions information on Creighton's other schools and colleges, call or visit online...

School of Law
(402) 280-2872

<http://culaw.creighton.edu/>

(Fee-waived applications offered to family and friends of Creighton University alumni. Call the number above or e-mail your name and address to ciriaco@culaw.creighton.edu.)

School of Dentistry
(402) 280-2695

<http://cudental.creighton.edu/>

School of Pharmacy and Allied Health Professions
(402) 280-2662

<http://spahp.creighton.edu/>

School of Medicine
(402) 280-2799

<http://medicine.creighton.edu/>

Graduate School
(402) 280-2870

<http://www.creighton.edu/GradSchool/Webs/index.htm>
(For information on graduate programs in the College of Business Administration, call 402-280-2829.)

University College
(402) 280-2424

<http://www.creighton.edu/UnivCol/>

(While application for admission is not required, those admitted as either degree- or certificate-seeking students may apply for financial aid.)

Thank you for your support of Creighton University.

FALL 2001

University Magazine
CREIGHTON

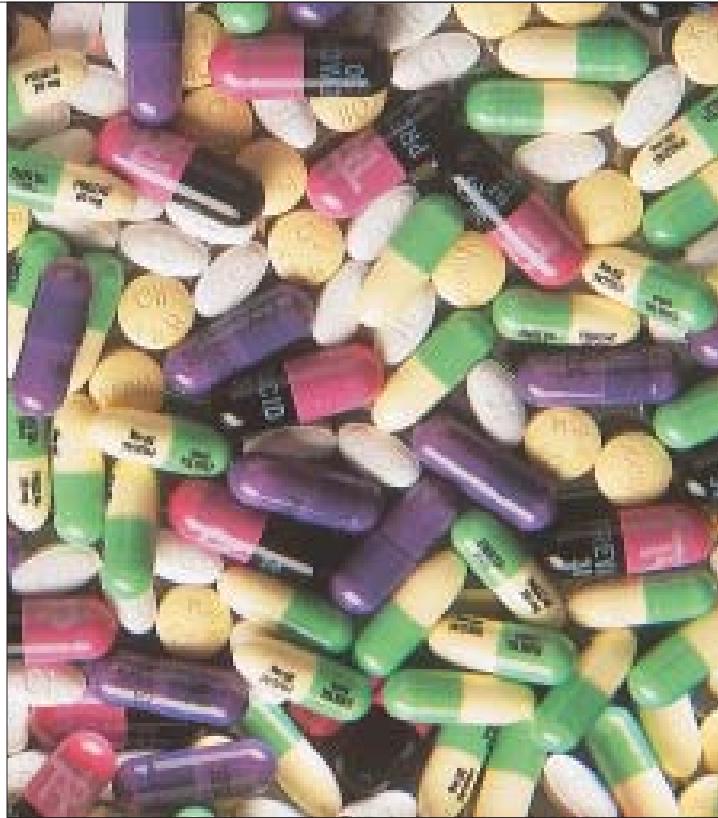


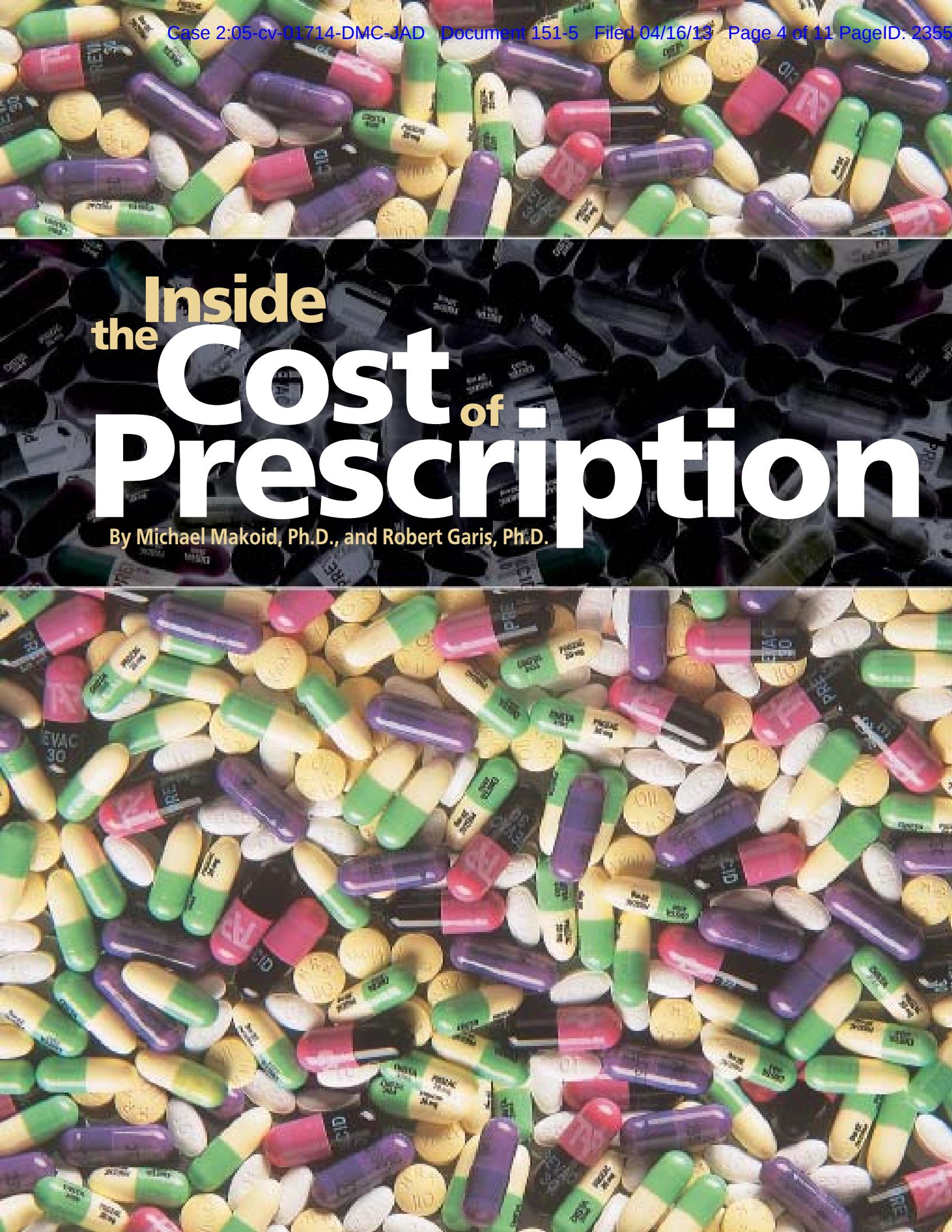
Photo by Michael Kleverer

the Inside **Cost of Prescription Drugs**

By Michael Makoid, Ph.D.
and Robert Garis, Ph.D.

16

Prescription drugs are the fastest-growing component of America's \$1.1 trillion health care bill. The amount Americans spend on prescription drugs has more than doubled in the last five years — from \$61.1 billion in 1995 to nearly \$132 billion in 2000. What's driving this increase? Creighton's Michael Makoid, Ph.D., and Robert Garis, Ph.D., expose the costs behind our prescription drug bill.



the Inside Cost of Prescription

By Michael Makoid, Ph.D., and Robert Garis, Ph.D.

Editor's Note: This is the third in a series on health care in the United States.

Drugs



Photo by Monte Kruse, BA '83

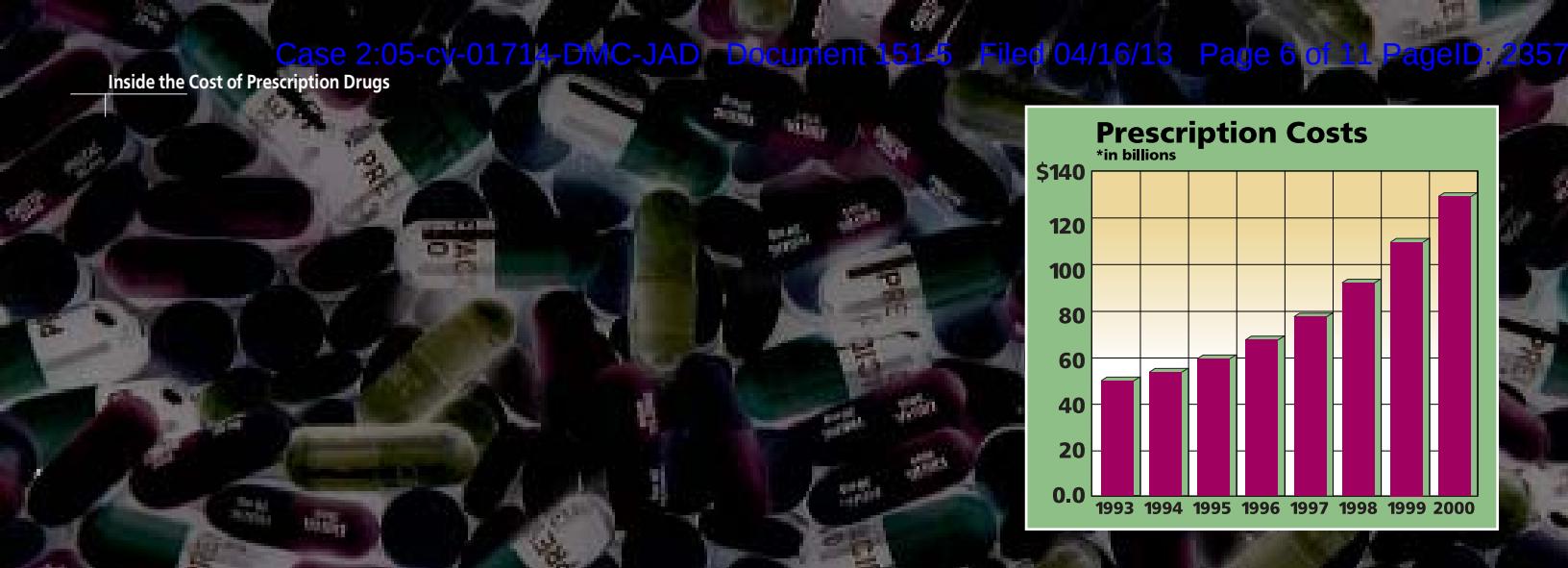
About the authors

Michael Makoid, Ph.D. (right), is professor and chair of the Department of Pharmacy Sciences in the School of Pharmacy and Allied Health Professions. He is a founder of Pharmaceutical Technologies Inc., a pharmaceutical benefits manager that serves thousands of employers nationwide. He can be reached at makoid@creighton.edu.

Robert Garis, Ph.D. (left), is an assistant professor in the Department of Pharmacy Sciences. His interests are in the costs of chronic illness and the pharmacy benefit management industry. He can be reached at rgaris@creighton.edu.

Americans spent nearly \$132 billion on prescribed drugs in 2000, as retail pharmacies filled a record 2.9 billion prescriptions. That equates to about 10.5 prescriptions for every man, woman and child in the United States, at a cost of about \$480 per person.

Prescription drugs remain the fastest-growing component of America's \$1.1 trillion health care bill. It's a bill, as you will see, with hidden costs. And it's a bill you pay, either out-of-pocket in direct payments or in co-pays and premiums, or out of the pool of wages and benefits set aside by your employer.



Let's take a closer look at four groups involved in your prescription drug benefit: The pharmacist, the drug manufacturer, the middleman and, you, the consumer.

The Pharmacist

Independent pharmacies in the United States have been closing at an average rate of more than 1,000 a year over the past 10 years. Lack of profit is one of the leading reasons. Traditional chain drugstores have been making a marginal comeback, and pharmacies in supermarkets and mass merchandisers have enjoyed fantastic growth. Pharmacies surviving are the ones with additional revenue streams from other products. When stand-alone pharmacies, which generate all of their profits from pharmaceuticals, try to compete in that arena, they simply go bankrupt. In 1999, the average net profit for an independent pharmacy was 3.6 percent, according to the *NCPA Pharmacia Digest*. By comparison, from an investment perspective, banks offer certificates of deposit with a guaranteed 5 percent return on investment.

This is not to diminish the importance of pharmacists. Pharmacists have been viewed as the most trusted professionals for the last two decades, according to the Gallup Poll. Pharmacists play a critical role in your health care. Pharmacists are seen as reliable sources for drug

information and the last line of defense between you and a medication error.

But pharmacists are in short supply and the problem is getting worse. The government projects a 4 percent net increase in pharmacists by 2005 and a 40 percent increase in prescription volume. Meanwhile, professional studies indicate a correlation between medication errors and pharmacist workload.

The Drug Manufacturers

Drug manufacturers are, for the most part, publicly traded companies, and one of their responsibilities is to generate a return on investment for stockholders, which they do. The return on equity in the drug industry has been 25 percent, according to Standard & Poor's. By comparison, the return on equity for retailing giant WalMart is 24 percent and for PepsiCo, it's 31 percent.

The amount Americans spend on prescription drugs has more than doubled in the last five years — from \$61.1 billion in 1995 to nearly \$132 billion in 2000. There are three major contributing factors: the proliferation of new expensive drugs, increased use of prescription drugs and price increases by drug manufacturers. Let's take a closer look at each.

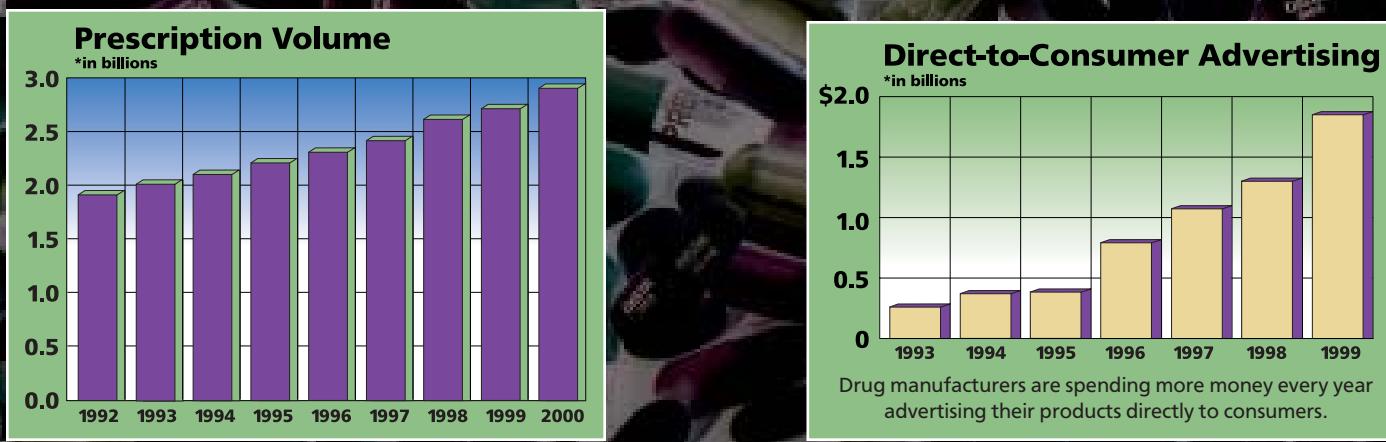
More brand-name drugs

New drugs have shown success in treating devastating illnesses — such as rheumatoid arthritis, HIV/AIDS, congestive heart failure, heart attack, osteoporosis and schizophrenia — and, in the case of non-sedating anti-histamines and drugs like Viagra, are helping us live better lives.

Brand-name drugs, however, are costly to develop, manufacture and market. On average, about 11 years of research and some \$500 million goes into bringing a new drug to market. For every drug that makes it, hundreds never see the light of day because they fail to meet federal standards. The required documentation for a new drug application can exceed several carloads of text.

The patent life of a drug molecule is 20 years, but, because the patent is issued for the date of discovery or creation, the drug manufacturer has about eight and a half years by the time the drug hits the market to recoup its investment before the patent runs out.

Generic drugs require considerably less initial investment. Every molecule is a known entity, already thoroughly researched. These products can be marketed at a fraction of the cost of the brand-name products, and many brand-name drug manufacturers have generic subsidiaries. Remember, this year's generic drugs were last year's hot brand names.



Prescription drug use rises

The 2.9 billion prescriptions filled in 2000 were a 7.5 percent increase over the previous year and about 1 billion more than were filled just eight years earlier. These trends will almost certainly continue as Baby Boomers age.

Not only are consumers purchasing more prescription drugs, they are buying the more costly brand-name remedies. Of the 50 top-selling prescription drugs in 2000, only four were generic. The average price of the top-50 sellers was \$67.15, compared to \$19.65 for the average generic prescription.

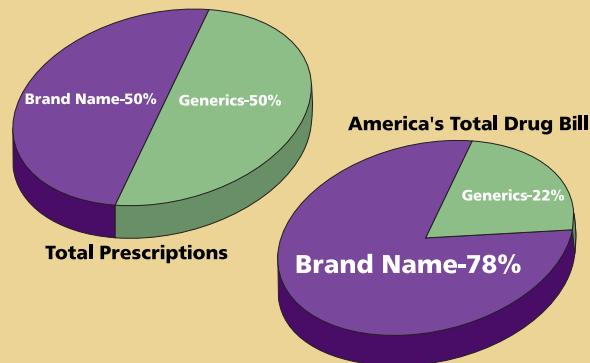
To influence drug use, drug manufacturers rely heavily on advertising and marketing, which can account for as much as 30 percent of drug manufacturers' costs. In addition to promotions targeting physicians, last year pharmaceutical manufacturers spent \$1.85 billion on advertising aimed directly at consumers. Did it work? Surveys in *Prevention Magazine* and by the FDA indicate that about a third of consumers ask for prescriptions by name because of advertisements they have seen. In 1999, drug manufacturers spent \$1.6 billion on direct-to-consumer advertising, and prescriptions for brand-name drugs increased 7.8 percent. One drug alone, Vioxx, a heavily advertised anti-arthritis medication, was responsible for more than 1 percent of the nation's total drug bill, bringing in \$1.5 billion and almost quintupling sales from the previous year. The 20 biggest prescription drug advertisers spent a combined \$900 million in 1999 on direct-to-consumer advertising, and

prescriptions for their products increased 25 percent. They had similar results in 2000. Combined with an average 8 percent increase in price, these companies realized a 34 percent increase in sales — for about \$6.8 billion in additional profit. But remember, we, the consumer, are choosing to purchase the more expensive products because of advertising. Isn't that what advertising is supposed to do — create demand?

generic prescriptions has risen only 1.7 percent annually. However, during that same time period, the price of brand-name prescriptions has increased at a rate of 10.5 percent annually.

Despite the fact that generic drugs represent nearly 50 percent of all prescriptions, they make up only about 22 percent of the total cost. The top 40 brand-name drugs, on the other hand, account for less than a quarter of all prescriptions

Generic vs. Brand-Name Drugs



Rising cost of prescription drugs

The cost of prescription drugs at retail has risen 6.7 percent annually from 1991 to 1998, according to a report from the Kaiser Family Foundation, far exceeding the 2.6 percent general inflation rate and the 4.6 inflation rate for medical care.

Again, the new brand-name drugs are fueling the increase. When generic drugs are taken into account, the rate of inflation in prescription drug prices is actually at its lowest level in 30 years. Over the last seven years, the price of

but represent almost 40 percent of America's prescription drug bill.

While there has been this proliferation of new, more powerful drugs, there have been relatively few new diseases. For some people, the newest brand-name therapy is the only one that will work, and they should be on those products. But for the majority, the generic therapies are more than adequate and should be the first line of defense, at about 20 to 30 percent of the cost of the newest brand-name therapies.



Evaluating the drug manufacturers

Millions of people are alive and millions more lead relatively healthy lives because of the efforts of America's pharmaceutical manufacturers. These companies play a critical role as the sole source of new drugs and new therapies; however, consumers should be aware of practices by drug companies that don't necessarily add value, but may add cost. For instance, Bristol-Myers Squibb tried to extend its exclusive right to sell its anti-anxiety drug BuSpar (1999 sales, \$600 million), just as its original patent was expiring, by patenting a molecule that appears in the body as BuSpar is metabolized. The new patent, which was later disallowed by a federal judge, delayed the introduction of a cheaper generic version of the drug. The Federal Trade Commission (FTC) also recently challenged three agreements between brand-name and generic drug

companies that allegedly delayed or were intended to delay generic drug competition in order to maintain higher prices. The most recent came this past March, when the FTC filed a complaint against Schering-Plough Corporation and two generic drug companies — Upsher-Smith Laboratories and ESI Lederle Inc. The FTC charged that Schering paid \$90 million to the two companies to delay introducing generic versions of Schering's K-Dur, a heart medication with 1998 sales topping \$220 million. The drug makers deny any wrongdoing. The FTC is currently conducting a study to determine the frequency of these agreements and whether brand-name manufacturers are listing additional patents, shortly before previous patents are to expire, in an effort to delay introduction of generics.

The Middlemen

Up until now we have been dealing with the highly visible costs of prescription drugs and their connected benefits. However, there is another group you normally don't see, whose services, it's been estimated, add another \$44 billion to America's already burgeoning pharmaceutical budget.

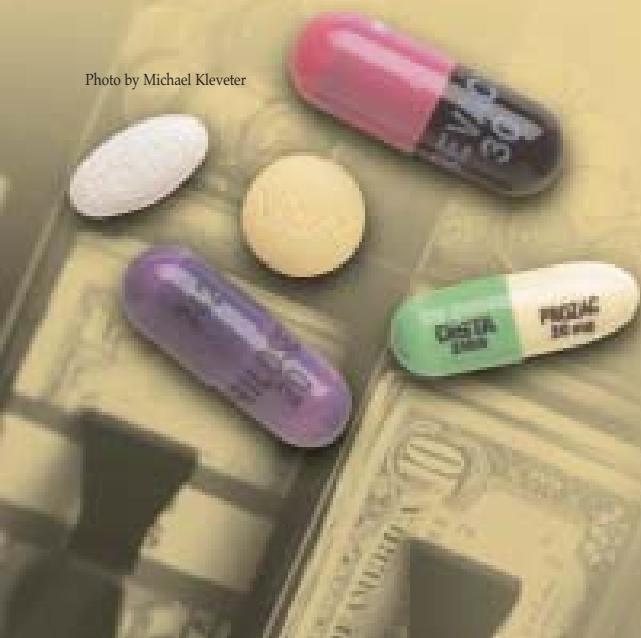
When we (the authors) filled prescriptions early in our pharmacy careers, if your health insurance included prescription drug coverage, you brought your prescription to our pharmacies and paid cash. Subsequently, you filled out a form and submitted the bill to your employer, and you waited for a reimbursement for some percent of the bill. Today, you bring in your prescription and a drug card. You pay a small co-pay and get your medication.

You don't fill out any forms, you don't submit a bill and you don't wait for a reimbursement.

There is a price for this convenience. First, we lose our cost sensitivity. We rarely know what our prescriptions cost because we only see the co-pay. (In reality, we pay the full cost, either through our insurance premiums or through a reduction in the pool of wages and benefits set aside by our employer.) Secondly, this system requires an electronic connection between pharmacies and insurance companies. Your personal information is now available to anybody who sees this transaction, and this information about you can be sold. This electronic connection has fostered a plethora of industries funded entirely by you. Let's take a closer look at these middlemen.

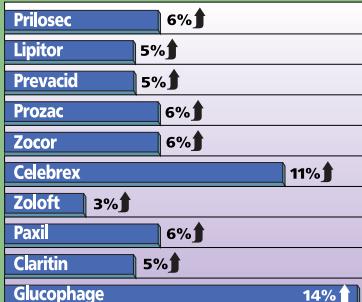
Here's how it works. A patient brings a prescription to the pharmacy; the pharmacist fills it and sends out an electronic claim, which is a request for payment for your prescription. Within a few seconds, the pharmacist knows what he or she is getting paid and how much to charge the patient. In those few seconds, the claim is "handled" by several entities, each of which adds cost to the prescription. Many of these entities, as mentioned above, earn additional revenue by selling your data to the drug companies and pharmacy chains, which use that data to better market their products. You pay for this data collection, both in direct fees and in higher costs of pharmaceuticals. The sale of this information gives its purchasers unprecedented control over the industry. Targeted marketing takes on a whole

Photo by Michael Kleveter



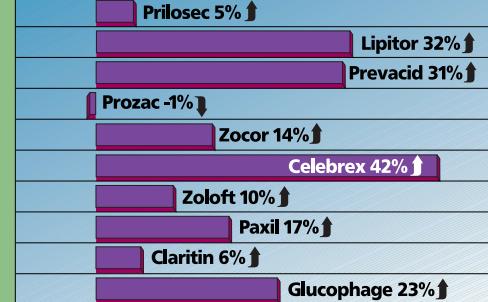
Increase in Price

of the 10 top-selling drugs from 1999 to 2000



Increase in Prescriptions

of the 10 top-selling drugs from 1999 to 2000



new meaning when the target is a specific physician rather than a subspecialty group of doctors. This, along with direct-to-consumer advertising, is one of the critical marketing changes that has fueled the rising cost of pharmaceuticals.

Software and Pre/post editor

First, there is the computer software needed to run a modern pharmacy. The software manufacturer may require the pharmacist to send his or her claim through the software manufacturer's network and on to "the gate," charging a fee along the way.

The claim also may go through a pre/post editor, which verifies that the claim is filled out correctly. The pre/post editor maximizes the claim to the most that your individual insurance contract will pay. So, if a pharmacist normally charges \$20 for a drug and the customer's insurance plan will pay \$30, the customer is charged \$30. Sometimes, the pre/post editor does not return the whole difference to the pharmacist (in this case, \$10), so the actual cost (\$30) does not show up in the price of the prescription paid to the pharmacist.

The gate and claims processor

The gate provides telephone access between the pharmacist and the claims processor. If necessary, the gate can manipulate the data provided by the pharmacist to make it compliant with industry standards. The gate generally sells your data. They also charge the pharmacist for each transaction (the national average is about 12 cents for each claim handled) and assess a flat fee

to the processor. While 12 cents may not seem like a lot, this adds up for a health plan with thousands of people. And if the pharmacist makes a mistake in the data (such as getting your middle initial, birth date or Social Security number wrong), the claim will be rejected by the computer, and the pharmacist must resubmit the claim and is charged another 12 cents by the gate. The gate sends the claim on to the processor.

The claims processor validates the claim. The claims processor checks the customer's insurance plan and tells the pharmacist the price of the prescription and the co-pay the customer is to be charged. For this, they charge your insurance plan a set fee, which can range up to \$1 per transaction. Again, any mistake in the data and the claim must be resubmitted, resulting in the claims processor assessing another transaction fee. They also sell your data.

The consultant, the insurance company and the PBM

Because most companies don't have the expertise in-house to manage their medical benefits, they outsource the payment of their employees' medical and pharmaceutical bills, a process that often includes a consultant, an insurance company and a pharmacy benefit manager (PBM). The PBM is the firm behind your prescription drug card. For clarity, we will refer to the pharmacy benefit manager as the prescription card company. The consultant, working for your employer, recommends an insurance carrier, which, in turn, outsources the pharmaceutical claims to the prescription card company. The

prescription card company contracts with drug manufacturers, mail order pharmacies and repackers.

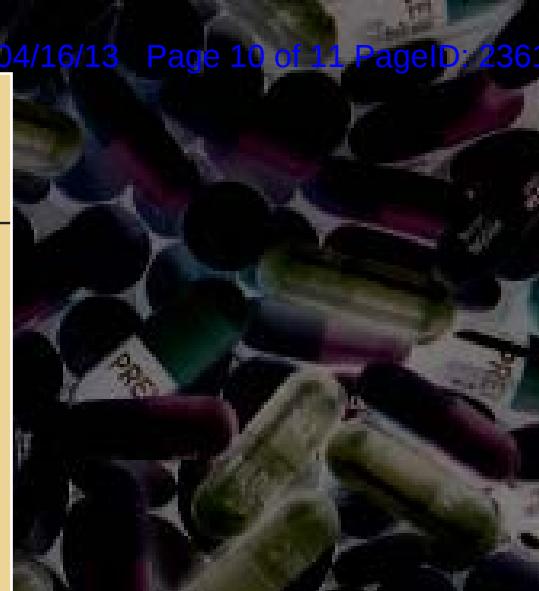
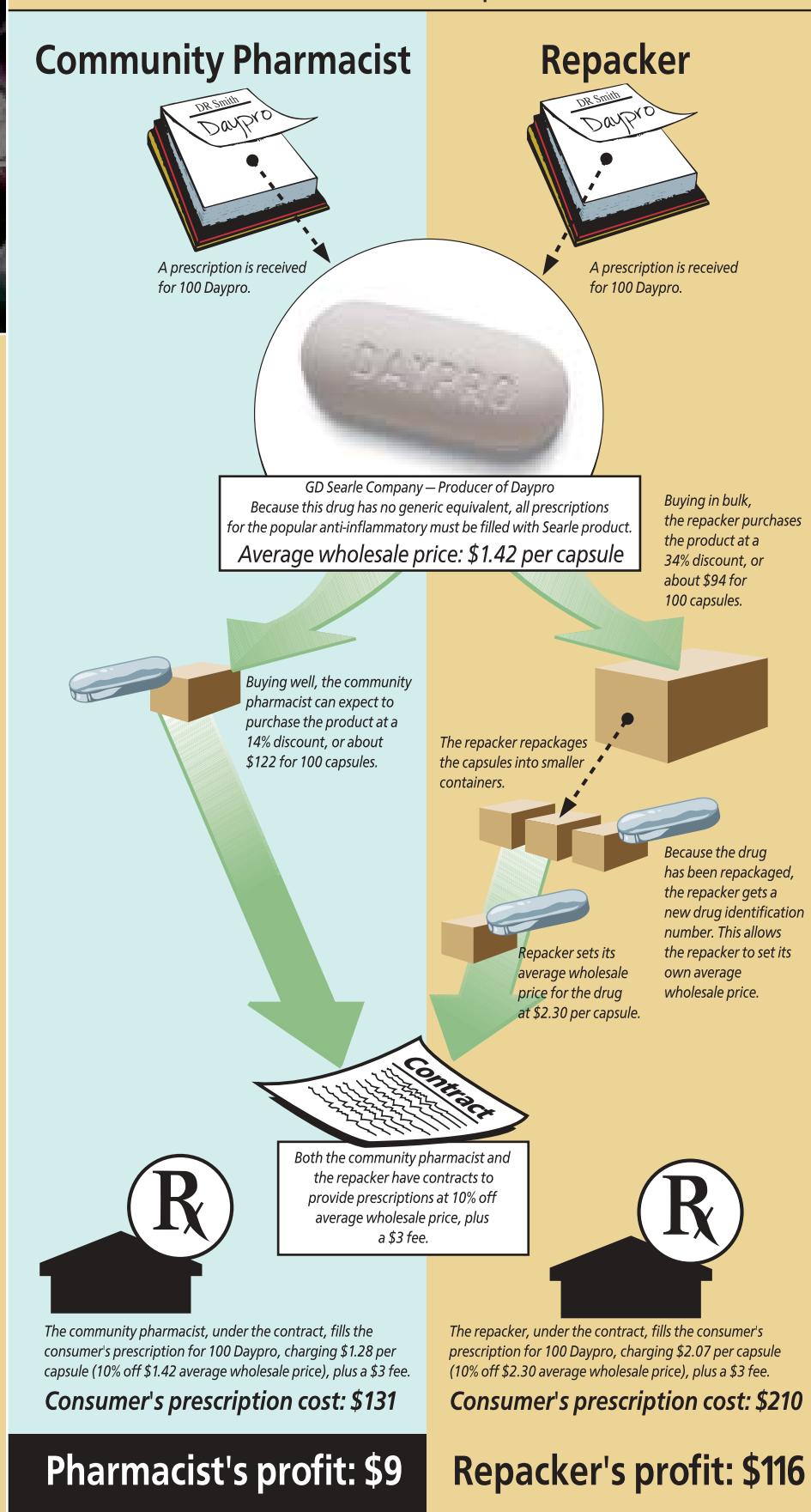
A good, educated consultant is worth the fee. But determining the "real" cost of prescription drugs can be tricky, since the average wholesale price (AWP) — the common industry measure of a drug's price — is somewhat akin to an automobile's sticker price. Just as the automobile industry has multiple car dealers selling the same vehicles at differing prices, the prescription drug industry has multiple vendors selling drugs at prices determined by each vendor.

Insurance companies negotiate contracts with medical groups and hospitals and offer those contracts to their clients. Most insurance companies outsource pharmaceutical contract negotiation and network maintenance to the prescription card companies.

The prescription card companies provide access to a network of pharmacy providers who are contracted to provide service and products at a negotiated price. The size of the network varies with the prescription card company. Many are local; some are nationwide. Most offer multiple co-pay options, along with a variety of other services. For instance, in one case, the prescription card company recommended an ergonomic consultant, who, through a suggested change in lighting, saved an employer roughly \$200,000 a year in migraine headache medication. While prescription card companies provide a valuable service, employers are best served by negotiating an up-front, flat fee to avoid hidden costs.

The case of the repacker: A repacker buys in bulk direct from the manufacturer, at a significant discount, and repackages the drugs into smaller containers for resale. That discount, however, is not always passed on to the consumer.

Here is an example:



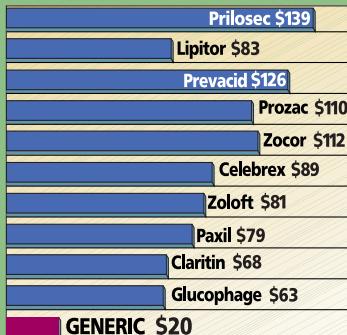
Hidden costs

Again, prescription card companies generally sell your data, and there can be a number of hidden costs from spread to a percent of savings clause to rebates to double billing. (All of these, except double billing, are legal practices and, in general, are embedded in a lengthy contract and seem to be reasonable to the employer. The problem is that most employers are not aware of the real price tag of their plan because of these hidden costs.) Many of these same opportunities exist for the insurance companies, as well.

The spread is the difference between what the prescription card company pays the pharmacist and what they bill the insurance company. For brand-name drugs, the prescription card company may pay the pharmacist 13 percent off the drug's average wholesale price and bill your insurance plan 10 percent off average wholesale price. If, for instance, the average wholesale price for your medication is \$2 per capsule, the prescription card company would pay the pharmacist \$1.74 per capsule while billing your insurance plan \$1.80 per capsule. In this case, the prescription card company is pocketing 3 percent (or 6 cents per capsule) off every prescription. For generic drugs, the drug's average wholesale price and actual acquisition cost can differ by 60 percent or more. The prescription card company sets the price that it is willing to pay. That price for the generic product is the MAC (Maximum Allowable Cost), which is generally well below the average wholesale price. Let's suppose

2000 Average Rx Cost

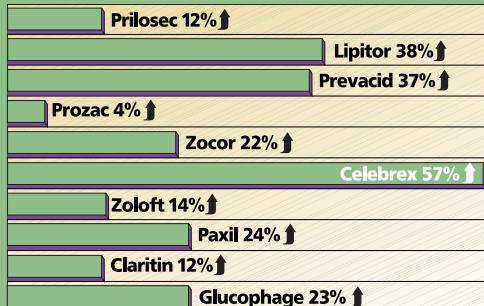
of the 10 top-selling drugs compared to the average generic



*Rounded to the nearest dollar

Increase in Retail Sales

of the 10 top-selling drugs from 1999 to 2000



the average wholesale price for your generic capsule is \$2, and the prescription card company has set a MAC price with the pharmacist of 90 cents. Your insurance plan pays the prescription card company 10 percent off average wholesale price for generic prescriptions, which, in this instance, would be \$1.80 per capsule. The pharmacist is paid 90 cents per capsule and the prescription card company pockets 90 cents, or 50 percent of the total cost.

The percent of savings clause is a seemingly reasonable clause in a company's contract that stipulates that savings will be split if the prescription card company makes a switch that saves the company money. However, by having the pharmacist switch from a brand-name drug (average wholesale cost, \$60) to the generic (average wholesale cost, \$10), prescription card companies can collect a sizable fee, often above and beyond what they are already getting paid.

It's strange to see rebates as a hidden cost. But, let's suppose a drug manufacturer offers a prescription card company a rebate for buying a more expensive brand-name product. But instead of passing this "rebate" on to the consumer, the prescription card company pockets the rebate. In reviewing one company's records, we found that the prescription card company had actually blocked the filling of prescriptions with generic drugs, requiring the higher-cost brand-name products, because the prescription card company took the rebate as revenue!

All of the above scenarios are legal and are generally written in a company's contract with a prescription card company. However, there are also illegal practices. If, for some reason, the pharmacist changes your initial prescription (maybe you wanted a two-month supply because you're going on vacation), the first prescription must be removed from the system — a process called reversal — before an amended prescription can be submitted. We have found that some prescription card companies bill your insurance plan for the original prescription (plus all transaction fees) PLUS bill you for amended prescriptions, an illegal practice known as double billing. The prescription card company reports that the pharmacy filled the prescription twice, BUT the pharmacy reversed the original prescription and was only paid for the amended prescription. Your insurance plan, however, paid for the original prescription plus transaction fees, the reversal transaction, AND the amended prescription plus its associated transaction fees. Pinpointing responsibility is difficult, especially when the prescription card company claims computer error.

Repackers

A repacker can buy large volumes of medication directly from the drug manufacturer at a substantial discount and repack it into smaller containers. The repacker then gets a separate drug identification number (or NDC) for that product and can set its own average wholesale price. (The box on page 22 gives

an example of what's going on in the repacking scene.) Not all repackers are rip-offs. A large chain can use its bulk buying power to increase its competitive edge and still maintain its margin.

The Consumer of Health Care (You)

What can we do as consumers about these staggering costs? Well, we can start by asking for generic products, and, if none is available, asking for a therapeutically equivalent product that is on your prescription card company's formulary (list of covered drugs). Company's could provide financial incentives for employees to use generic drugs, or make employees who choose to use brand-name drugs when a generic is available pay the difference between the brand-name and the generic product. It's amazing how attractive a generic product becomes in this situation. Pharmacists could be given incentives to counsel the use of generic and formulary prescriptions. Tim Covington, PharmD, director of the Managed Care Institute at the McWhorter School of Pharmacy, estimates that we could save tens of billions of dollars if we increase the use of generic drugs. Will we? That's the \$132 billion — and rising — question. Remember, it's your money. ☐